

RECEIVED



MAR 08 2002

TECH CENTER 1600/2900

ENTERED

1632

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/908,988B

DATE: 02/26/2002

TIME: 14:06:37

Input Set : A:\MYOG028.txt

Output Set: N:\CRF3\02262002\I908988B.raw

3 <110> APPLICANT: OLSON, ERIC
4 SPENCER, JEFFREY A.
6 <120> TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR STABILIZING MICROTUBULES
7 IN STRIATED MUSCLE CELLS
9 <130> FILE REFERENCE: MYOG:028US
11 <140> CURRENT APPLICATION NUMBER: 09/908,988B
C--> 12 <141> CURRENT FILING DATE: 2000-07-18
14 <150> PRIOR APPLICATION NUMBER: 60/219,020
15 <151> PRIOR FILING DATE: 2000-07-18
17 <160> NUMBER OF SEQ ID NOS: 6
19 <170> SOFTWARE: PatentIn Ver. 2.1
21 <210> SEQ ID NO: 1
22 <211> LENGTH: 1431
23 <212> TYPE: DNA
24 <213> ORGANISM: Mus musculus
26 <220> FEATURE:
27 <221> NAME/KEY: CDS
28 <222> LOCATION: (199)..(1296)
30 <400> SEQUENCE: 1
31 aaggagtgtgacacagagtgtctggaaatagacaggggtgagaggagctgttaggggaagg60
33 gacaggactcttccaagaggagcaatagc cgggatcccaagaatccagt cagcctaaac120
35 tgaccgaggaagggtgcacagcgaggag aaggccaacgacagggccacagcgaggcag180
37 gctccagagc gccgcggg atg aac ttc acg gtg ggt ttc aag ccg ctg cta231
38 Met Asn Phe Thr Val Gly Phe Lys Pro Leu Leu
39 1 5 10
41 ggg gat gcg cac aac atg gac aac ttg gag aag cag ctc att tgc ccc279
42 Gly Asp Ala His Asn Met Asp Asn Leu Glu Lys Gln Leu Ile Cys Pro
43 15 20 25
45 atc tgc ctg gag atg ttc tcc aag ccc gtg gtg atc ttg ccc tgc caa327
46 Ile Cys Leu Glu Met Phe Ser Lys Pro Val Val Ile Leu Pro Cys Gln
47 30 35 40
49 cac aac ctg tgc cgc aag tgt gcc aac gac gtc ttc cag gcc tct aat375
50 His Asn Leu Cys Arg Lys Cys Ala Asn Asp Val Phe Gln Ala Ser Asn
51 45 50 55
53 cct ctg tgg caa tcc cgg ggc tcc aca acg gtg tct tca gga gga cgt423
54 Pro Leu Trp Gln Ser Arg Gly Ser Thr Thr Val Ser Ser Gly Gly Arg
55 60 65 70 75
57 ttc cga tgc cca tct tgt agg cac gag gtt gtc ctg gac agg cat ggt471
58 Phe Arg Cys Pro Ser Cys Arg His Glu Val Val Leu Asp Arg His Gly
59 80 85 90
61 gtc tat ggc ctg cag cgg aac ctg cta gtg gag aac atc att gac atc519
62 Val Tyr Gly Leu Gln Arg Asn Leu Leu Val Glu Asn Ile Ile Asp Ile
63 95 100 105

RAW SEQUENCE LISTING

DATE: 02/26/2002

PATENT APPLICATION: US/09/908,988B

TIME: 14:06:38

Input Set : A:\MYOG028.txt

Output Set: N:\CRF3\02262002\I908988B.raw

65	tac aag cag gag tcc tcc cgg cca ctg cac gcc aag gct gaa cag cac	567
66	Tyr Lys Gln Glu Ser Ser Arg Pro Leu His Ala Lys Ala Glu Gln His	
67	110 115 120	
69	ctc atg tgt gag gag cac gag gac gag aag atc aac atc tac tgc ctg	615
70	Leu Met Cys Glu Glu His Glu Asp Glu Lys Ile Asn Ile Tyr Cys Leu	
71	125 130 135	
73	agc tgc gag gtg ccc acc tgc tct ctc tgc aag gtt ttc ggc gcc cac	663
74	Ser Cys Glu Val Pro Thr Cys Ser Leu Cys Lys Val Phe Gly Ala His	
75	140 145 150 155	
77	aag gac tgt gag gtg gcc cct ctg ccc acc att tac aaa cgc cag aag	711
78	Lys Asp Cys Glu Val Ala Pro Leu Pro Thr Ile Tyr Lys Arg Gln Lys	
79	160 165 170	
81	agt gag ctg agc gat ggc atc gcg atg ctg gtg gcg ggc aat gac cgt	759
82	Ser Glu Leu Ser Asp Gly Ile Ala Met Leu Val Ala Gly Asn Asp Arg	
83	175 180 185	
85	gtg cag gca gtg atc acc cag atg gag gag gtg tgc cag acc att gag	807
86	Val Gln Ala Val Ile Thr Gln Met Glu Glu Val Cys Gln Thr Ile Glu	
87	190 195 200	
89	gac aac agc cgc aga cag aag caa ctg tta aac cag agg ttc gag acc	855
90	Asp Asn Ser Arg Arg Gln Lys Gln Leu Leu Asn Gln Arg Phe Glu Thr	
91	205 210 215	
93	ctg tgc gcg gtt ttg gag gag cgc aag ggc gaa ctg ctt caa gca ctg	903
94	Leu Cys Ala Val Leu Glu Glu Arg Lys Gly Glu Leu Leu Gln Ala Leu	
95	220 225 230 235	
97	gcc cgg gag cag gag gag aag ttg cag cgc gtg cgg ggc ctc atc cgc	951
98	Ala Arg Glu Gln Glu Glu Lys Leu Gln Arg Val Arg Gly Leu Ile Arg	
99	240 245 250	
101	cag tac gga gac cac ttg gag ggc tcc tca aag ctg gtg gag tcc gcc	999
102	Gln Tyr Gly Asp His Leu Glu Gly Ser Ser Lys Leu Val Glu Ser Ala	
103	255 260 265	
105	atc cag tcc atg gag gag ccg cag atg gct ctc tac ctc cag cag gca	1047
106	Ile Gln Ser Met Glu Glu Pro Gln Met Ala Leu Tyr Leu Gln Gln Ala	
107	270 275 280	
109	aag gag ctg atc aac aag gtc ggg gca atg tcg aag gtg gag ctg gca	1095
110	Lys Glu Leu Ile Asn Lys Val Gly Ala Met Ser Lys Val Glu Leu Ala	
111	285 290 295	
113	gga cgg ccg gag cca ggc tat gag agc atg gag caa ttc tct gtg agc	1143
114	Gly Arg Pro Glu Pro Gly Tyr Glu Ser Met Glu Gln Phe Ser Val Ser	
115	300 305 310 315	
117	gtg gag cac gtg gcc gaa atg ttg cga acc atc gac ttc cag ccg ggc	1191
118	Val Glu His Val Ala Glu Met Leu Arg Thr Ile Asp Phe Gln Pro Gly	
119	320 325 330	
121	gcc gct ggg gat gaa gag gat gac gac atg gct ttg gat ggg gag gag	1239
122	Ala Ala Gly Asp Glu Glu Asp Asp Asp Met Ala Leu Asp Gly Glu Glu	
123	335 340 345	
125	ggc aat gcg ggg ctg gag gag gag cgg ctg gac gtg cca gaa ggc tca	1287
126	Gly Asn Ala Gly Leu Glu Glu Glu Arg Leu Asp Val Pro Glu Gly Ser	
127	350 355 360	
129	ggc ctg cac tgacccgact ctgatccaga gcgcacaccc gaagcgggag	1336

RAW SEQUENCE LISTING

DATE: 02/26/2002

PATENT APPLICATION: US/09/908,988B

TIME: 14:06:38

Input Set : A:\MYOG028.txt

Output Set: N:\CRF3\02262002\I908988B.raw

```

130 Gly Leu His
131      365
133 ccaagggatg ctgaggatct gcgcagagac caccgcgcca ccaagctcgg cttcccgcgc 1396
135 ccgggaaggt tctcaataaa ggactcaagt gtccc 1431
138 <210> SEQ ID NO: 2
139 <211> LENGTH: 366
140 <212> TYPE: PRT
141 <213> ORGANISM: Mus musculus
143 <400> SEQUENCE: 2
144 Met Asn Phe Thr Val Gly Phe Lys Pro Leu Leu Gly Asp Ala His Asn
145 1 5 10 15
147 Met Asp Asn Leu Glu Lys Gln Leu Ile Cys Pro Ile Cys Leu Glu Met
148 20 25 30
150 Phe Ser Lys Pro Val Val Ile Leu Pro Cys Gln His Asn Leu Cys Arg
151 35 40 45
153 Lys Cys Ala Asn Asp Val Phe Gln Ala Ser Asn Pro Leu Trp Gln Ser
154 50 55 60
156 Arg Gly Ser Thr Thr Val Ser Ser Gly Gly Arg Phe Arg Cys Pro Ser
157 65 70 75 80
159 Cys Arg His Glu Val Val Leu Asp Arg His Gly Val Tyr Gly Leu Gln
160 85 90 95
162 Arg Asn Leu Leu Val Glu Asn Ile Ile Asp Ile Tyr Lys Gln Glu Ser
163 100 105 110
165 Ser Arg Pro Leu His Ala Lys Ala Glu Gln His Leu Met Cys Glu Glu
166 115 120 125
168 His Glu Asp Glu Lys Ile Asn Ile Tyr Cys Leu Ser Cys Glu Val Pro
169 130 135 140
171 Thr Cys Ser Leu Cys Lys Val Phe Gly Ala His Lys Asp Cys Glu Val
172 145 150 155 160
174 Ala Pro Leu Pro Thr Ile Tyr Lys Arg Gln Lys Ser Glu Leu Ser Asp
175 165 170 175
177 Gly Ile Ala Met Leu Val Ala Gly Asn Asp Arg Val Gln Ala Val Ile
178 180 185 190
180 Thr Gln Met Glu Glu Val Cys Gln Thr Ile Glu Asp Asn Ser Arg Arg
181 195 200 205
183 Gln Lys Gln Leu Leu Asn Gln Arg Phe Glu Thr Leu Cys Ala Val Leu
184 210 215 220
186 Glu Glu Arg Lys Gly Glu Leu Leu Gln Ala Leu Ala Arg Glu Gln Glu
187 225 230 235 240
189 Glu Lys Leu Gln Arg Val Arg Gly Leu Ile Arg Gln Tyr Gly Asp His
190 245 250 255
192 Leu Glu Gly Ser Ser Lys Leu Val Glu Ser Ala Ile Gln Ser Met Glu
193 260 265 270
195 Glu Pro Gln Met Ala Leu Tyr Leu Gln Gln Ala Lys Glu Leu Ile Asn
196 275 280 285
198 Lys Val Gly Ala Met Ser Lys Val Glu Leu Ala Gly Arg Pro Glu Pro
199 290 295 300
201 Gly Tyr Glu Ser Met Glu Gln Phe Ser Val Ser Val Glu His Val Ala
202 305 310 315 320

```

RAW SEQUENCE LISTING

DATE: 02/26/2002

PATENT APPLICATION: US/09/908,988B

TIME: 14:06:38

Input Set : A:\MYOG028.txt

Output Set: N:\CRF3\02262002\I908988B.raw

```

204 Glu Met Leu Arg Thr Ile Asp Phe Gln Pro Gly Ala Ala Gly Asp Glu
205                               325                               330                               335
207 Glu Asp Asp Asp Met Ala Leu Asp Gly Glu Glu Gly Asn Ala Gly Leu
208                               340                               345                               350
210 Glu Glu Glu Arg Leu Asp Val Pro Glu Gly Ser Gly Leu His
211                               355                               360                               365
215 <210> SEQ ID NO: 3
216 <211> LENGTH: 2590
217 <212> TYPE: DNA
218 <213> ORGANISM: Mus musculus
220 <220> FEATURE:
221 <221> NAME/KEY: CDS
222 <222> LOCATION: (80)..(1714)
224 <400> SEQUENCE: 3
225 ctcgagattt acccttacag aagctgttcg ggagcacctt tcccttggca gcacactcag 60
227 ggacagggac ggcaaggaa atg agc act tct ctg aat tac aag tct ttc tcc 112
228                               Met Ser Thr Ser Leu Asn Tyr Lys Ser Phe Ser
229                               1                               5                               10
231 aaa gag cag cag acc atg gat aac ttg gaa aag caa ctg atc tgt ccc 160
232 Lys Glu Gln Gln Thr Met Asp Asn Leu Glu Lys Gln Leu Ile Cys Pro
233                               15                               20                               25
235 atc tgc cta gag atg ttc acg aag cct gtg gtc att ctc cct tgc cag 208
236 Ile Cys Leu Glu Met Phe Thr Lys Pro Val Val Ile Leu Pro Cys Gln
237                               30                               35                               40
239 cac aac ctg tgc agg aaa tgt gcc agt gac atc ttc cag gcc tct aac 256
240 His Asn Leu Cys Arg Lys Cys Ala Ser Asp Ile Phe Gln Ala Ser Asn
241                               45                               50                               55
243 ccg tac tta ccc aca aga gga ggc acc acc gtg gca tca ggg ggc cgc 304
244 Pro Tyr Leu Pro Thr Arg Gly Gly Thr Thr Val Ala Ser Gly Gly Arg
245 60                               65                               70                               75
247 ttc cgc tgt ccc tcc tgc aga cat gag gtg tta gac aga cat ggg 352
248 Phe Arg Cys Pro Ser Cys Arg His Glu Val Val Leu Asp Arg His Gly
249                               80                               85                               90
251 gtc tat gga ctg cag agg aac ctg ctc gtg gaa aac att att gat atc 400
252 Val Tyr Gly Leu Gln Arg Asn Leu Leu Val Glu Asn Ile Ile Asp Ile
253                               95                               100                               105
255 tac aag cag gaa tcc acc agg cca gaa aaa aaa ttg gac cag ccc atg 448
256 Tyr Lys Gln Glu Ser Thr Arg Pro Glu Lys Lys Leu Asp Gln Pro Met
257                               110                               115                               120
259 tgt gaa gag cat gaa gag gaa cgc atc aac atc tat tgt ctg aac tgt 496
260 Cys Glu Glu His Glu Glu Glu Arg Ile Asn Ile Tyr Cys Leu Asn Cys
261                               125                               130                               135
263 gaa gtg ccc acc tgt tcc ttg tgc aag gtt ttt ggc gcc cat aag gac 544
264 Glu Val Pro Thr Cys Ser Leu Cys Lys Val Phe Gly Ala His Lys Asp
265 140                               145                               150                               155
267 tgc cag gtg gct ccc ctg act cat gtg ttc cag agg cag aag tca gag 592
268 Cys Gln Val Ala Pro Leu Thr His Val Phe Gln Arg Gln Lys Ser Glu
269                               160                               165                               170
271 ctc agt gat ggt att gct gta ctt gtg gga agc aac gat aga gtc cag 640

```

RAW SEQUENCE LISTING

DATE: 02/26/2002

PATENT APPLICATION: US/09/908,988B

TIME: 14:06:38

Input Set : A:\MYOG028.txt

Output Set: N:\CRF3\02262002\I908988B.raw

272	Leu	Ser	Asp	Gly	Ile	Ala	Val	Leu	Val	Gly	Ser	Asn	Asp	Arg	Val	Gln	
273				175					180					185			
275	ggt	gtg	atc	agc	cag	ctg	gag	gac	acc	tgt	aaa	act	att	gag	gag	tgc	688
276	Gly	Val	Ile	Ser	Gln	Leu	Glu	Asp	Thr	Cys	Lys	Thr	Ile	Glu	Glu	Cys	
277			190					195					200				
279	tgc	aga	aag	cag	aaa	cag	gac	ctg	tgt	gag	aaa	ttt	gat	cac	cta	tac	736
280	Cys	Arg	Lys	Gln	Lys	Gln	Asp	Leu	Cys	Glu	Lys	Phe	Asp	His	Leu	Tyr	
281		205					210					215					
283	ggc	atc	ctg	gag	gag	agg	aag	act	gaa	atg	acc	caa	gcc	atc	act	cga	784
284	Gly	Ile	Leu	Glu	Glu	Arg	Lys	Thr	Glu	Met	Thr	Gln	Ala	Ile	Thr	Arg	
285	220					225					230					235	
287	aca	cag	gag	gag	aaa	ctg	gaa	cat	gtc	cga	act	ctt	atc	agg	aag	tat	832
288	Thr	Gln	Glu	Glu	Lys	Leu	Glu	His	Val	Arg	Thr	Leu	Ile	Arg	Lys	Tyr	
289				240					245					250			
291	tcc	gat	cac	ctg	gag	aac	gta	tcc	aag	ttg	gtg	gag	tca	gga	atc	cag	880
292	Ser	Asp	His	Leu	Glu	Asn	Val	Ser	Lys	Leu	Val	Glu	Ser	Gly	Ile	Gln	
293			255						260					265			
295	ttc	atg	gat	gag	ccc	gaa	atg	gca	gta	ttt	ctg	cag	aat	gcc	aag	acc	928
296	Phe	Met	Asp	Glu	Pro	Glu	Met	Ala	Val	Phe	Leu	Gln	Asn	Ala	Lys	Thr	
297			270					275					280				
299	ctg	ttg	caa	aag	atc	gtg	gaa	gca	tca	aag	gcg	ttt	cag	atg	gag	aaa	976
300	Leu	Leu	Gln	Lys	Ile	Val	Glu	Ala	Ser	Lys	Ala	Phe	Gln	Met	Glu	Lys	
301		285					290					295					
303	cta	gaa	caa	ggt	tat	gag	atc	atg	agc	aac	ttc	act	gtc	aat	ctc	aat	1024
304	Leu	Glu	Gln	Gly	Tyr	Glu	Ile	Met	Ser	Asn	Phe	Thr	Val	Asn	Leu	Asn	
305	300					305					310				315		
307	aga	gaa	gaa	aaa	att	atc	cgt	gaa	att	gac	ttt	tct	aga	gaa	gag	gaa	1072
308	Arg	Glu	Glu	Lys	Ile	Ile	Arg	Glu	Ile	Asp	Phe	Ser	Arg	Glu	Glu	Glu	
309				320						325				330			
311	gag	gaa	gaa	gat	gca	gga	gaa	ata	gat	gaa	gaa	gga	gaa	gga	gag	gat	1120
312	Glu	Glu	Glu	Asp	Ala	Gly	Glu	Ile	Asp	Glu	Glu	Gly	Glu	Gly	Glu	Asp	
313			335						340				345				
315	gca	gta	gaa	gta	gaa	gag	gca	gaa	aat	gtt	caa	ata	gca	tct	tca	ggg	1168
316	Ala	Val	Glu	Val	Glu	Glu	Ala	Glu	Asn	Val	Gln	Ile	Ala	Ser	Ser	Gly	
317		350						355					360				
319	gaa	gag	gag	agt	ctg	gag	aaa	gct	gca	gag	ccc	tct	cag	ctt	ccc	gca	1216
320	Glu	Glu	Glu	Ser	Leu	Glu	Lys	Ala	Ala	Glu	Pro	Ser	Gln	Leu	Pro	Ala	
321		365					370				375						
323	gag	ctt	cag	gtc	gcc	cca	gag	cca	cta	cct	gct	tcc	tct	cca	gaa	ccg	1264
324	Glu	Leu	Gln	Val	Ala	Pro	Glu	Pro	Leu	Pro	Ala	Ser	Ser	Pro	Glu	Pro	
325	380					385				390					395		
327	ttt	tca	tcc	atg	cca	cct	gct	gca	gat	gtc	ctg	gtg	aca	cag	ggg	gag	1312
328	Phe	Ser	Ser	Met	Pro	Pro	Ala	Ala	Asp	Val	Leu	Val	Thr	Gln	Gly	Glu	
329				400					405					410			
331	gtg	gtg	ccc	att	ggc	tct	cag	cag	acc	aca	cag	tct	gaa	act	tca	ggc	1360
332	Val	Val	Pro	Ile	Gly	Ser	Gln	Gln	Thr	Thr	Gln	Ser	Glu	Thr	Ser	Gly	
333			415						420				425				
335	cct	tca	gca	gcg	gaa	act	gcg	gat	ccc	ttg	ttt	tac	cct	agt	tgg	tat	1408
336	Pro	Ser	Ala	Ala	Glu	Thr	Ala	Asp	Pro	Leu	Phe	Tyr	Pro	Ser	Trp	Tyr	

VERIFICATION SUMMARY

DATE: 02/26/2002

PATENT APPLICATION: US/09/908,988B

TIME: 14:06:39

Input Set : A:\MYOG028.txt

Output Set: N:\CRF3\02262002\I908988B.raw

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date